What is claimed is:

1. In a encoding/decoding method of an RS code, a encoding method of RS code in bit level comprising the steps of:

generating binary equivalence of the RS code by multiplying systematic generator matrix and binary information sequence of the RS code; and

generating row and column vectors using the binary equivalence of the RS code as a component code.

2. In a encoding/decoding method of an RS code, a decoding method of the RS code in bit level comprising the steps of:

generating binary trellis using a binary parity check matrix which is corresponded to a binary generator matrix of the RS code from a received signal; and

performing repeatedly processes of decoding the row and column vectors using the binary trellis and of getting extrinsic information of bit level and inputting the extrinsic information of bit level as a new decoding information.

3. A encoding apparatus of RS code in bit level comprises:

a source information inputting unit which is inputted source information for encoding;

a binary conversion unit being inputted non-binary symbols outputted from the source information inputting unit and conversing them into binary symbols;

a encoding unit for encoding the binary symbols in order to check and correct errors which may be generated by the binary symbols on a communication

channel; and

a modulating unit for modulating the binary symbols encoded in the encoding unit so as to transmit the symbols through the communication channel.

4. The apparatus of claim 3, wherein the binary conversion unit generates binary equivalence of the RS code by multiplying binary information sequence by the systematic generator matrix, and after that, generates bit level RS code using the binary equivalence.

5. The apparatus of claim 3, wherein the encoding unit generates row and column vectors using the bit level RS code as a component code.

6. A decoding apparatus of RS code in bit level comprising:

a demodulating unit for demodulating the binary symbols of RS code which are transmitted from the communication channel;

a decoding unit for repeatedly decoding the row and column vectors of the binary symbols using the binary equivalence of the RS code; and

a source information outputting unit for outputting the decoded binary symbols as data stream.

7. The apparatus of claim 6, wherein the decoding unit comprises:

a column vector decoder generating column vector by calculating the sequence of the bit level RS code and new decoding information transmitted from the demodulating unit; and

a row vector decoder generating row vector by being inputted the column

vector transmitted from the column vector decoder, and feedbacking new decoding information to the column vector decoder.